#### REFLECTIONS

ON

## YELLOW PEVER

## PERIODS;

OB,

## A PARTICULAR INVESTIGATION

OF THE

## LONG CONTESTED QUESTION,

WHETHER

THE YELLOW FEVER CAN ORIGINATE AMONGST US;

OR,

IS ALWAYS IMPORTED FROM ABROAD.

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READ BEFORE THE NEW-YORK COUNTY MEDICAL SOCIETY, 13TH SEPT. 1819

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#### REFLECTIONS

ON

## YELLOW FEVER PERIODS;

OR,

A particular investigation of the long contested question, whether the Yellow Fever can originate amongst us; or, is always imported from abroad.

This controversy must be settled by first principles, and not by cases; because, there are as many facts to prove its domestic origin, as its importation from abroad.

We shall divide our reflections on this subject into

- I. On Epidemic periods.
- II. On Yellow Fever periods.
- III. On what generates the Yellow Fever.

## I. ON EPIDEMIC PERIODS.

By an Epidemic Period, we mean precisely what the ancients understood by an epidemic constitution of years; epidemic, or pestilential seasons; a pestilential state of the air, or a secret constitution of atmosphere. It is that

period of time, that succession of months or years, in which an epidemic rages and spreads extensively.

We have chosen the word period in preference to all the terms which have been heretofore used; because, it conveys no false impression, no indistinct, nor indefinite idea.

If we are ever so fortunate as to discover the reason of epidemics appearing at one time, and not at another,  $i.\ e.$  the cause of epidemic periods, we shall then be in season for a new name, and can select one which is expressive of the cause itself.

The first principle to be established, in this investigation, is, whether there be such a thing as an epidemic period; an epidemic constitution of years; epidemic, or pestilential seasons; a pestilential state of the air; or, a secret constitution of the atmosphere.

If the concurrent testimony of every physician, who has written on Epidemics, from Hippocrates to the present time, can be admitted in evidence, the fact is well established. Their opinions, as we learn from theirworks, were not founded on hypothesis, for they have left us their records of epidemics, in which it appears, that, for a number of years, the plague, small-pox, measles, hooping cough, or influenza, was never seen, or only sporadic cases; by and by, one or the other appeared, became epidemic, spread far and wide, and desolated the country for a length of time. This season is what is called an epidemic period, or constitution of years. We will quote some authorities on this subject.

Hippocrates, in his Epidemics, speaks of pestilential seasons; and in his third book, of the malignant state or year.

"He considered pestilence as the effect of particular seasons and winds. A pestilential state or constitution of air, he describes as occasioned by a continuation of southerly winds, and a warm, humid, clouded atmosphere."

De morbis vulgaribus, lib. 3, as quoted by Webster on Epidemics, vol. I. p. 10.

"The Coan sage, indeed, seems to have been aware that the seasons alone were not sufficient to account for pestilence, for he speaks of to theion, some divine principle in the air, by which modern writers of celebrity suppose to be intended what is now called an epidemic constitution, resulting from changes in the atmosphere, produced by unknown causes."

Webster on Epidemics, I. p. 10.

Hippocrates, in his second section on Epidemics, describes what he calls *Thatustasis loimodes*, a pestilential state of the air or seasons.

Ætius in the IXth chapter of his Tetrabiblos, which he wrote at the close of the fifth century, says, "Sometimes the surrounding air, becoming unusually humid and hot, induces a pestilential constitution."

Webster, I. p. 12.

Diemerbroeck speaks of a deadly pestilent germ, like a subtle fermentum or leaven, sent from heaven, in a very

small quantity, diffusing itself through the air like a subtle gas, and rendering it impure, causing the plague.

- "Sec. 1. If one were to examine all the branches of physic," says Sydenham, "nothing, perhaps, would appear so surprising as the different, and perfectly dissimilar face of epidemic diseases; which do not so much relate to, and depend upon the various seasons of the same year, as upon the different constitutions of different years."
- "Sec. 2. Whether a careful examination might show, that certain tribes of epidemic disorders constantly follow others in one determined series, or circle, as it were; or whether they all return indiscriminately, and without any order, according to the secret disposition of the air, and the inexplicable succession of seasons, I am not certain."
- "Sec. 5. The matter seems to stand thus; there are various general constitutions of years, that owe their origin neither to heat, cold, dryness, nor moisture, that subject the human body to particular distempers so long as that kind of constitution prevails, which, after a certain course of years, declines, and gives way to another."
- "Sec. 8. The great variety in epidemics happens from hence, that every constitution produces diseases considerably differing from those of the same kind, that prevailed in other constitutions, at another time; which not only holds true of fevers, but of most epidemic diseases."

Swan's Sydenham, p. 4, 5.

"It is altogether foreign to my design here, to enume-

rate all the appearances that belong to a pestilential constitution."

Hodges on the Plague in London, p. 85.

"It is remarkable, that a morbid constitution of the air sometimes exists under very different, and frequently opposite circumstances of its sensible qualities, and that the same constitution of the air is often protracted for two, three, four, or even six years."

Rush's Inquiries, Vol. III. p. 143.

"I hold the epidemic of last season, [1798] to have been, as in former years, the offspring of a postilential constitution of our atmosphere."

Caldwell's Memoirs, p. 101.

"In the year of Rome 317, and B. C. 437, commenced a pestilential state that afflicted Rome for five years."

Livy, b. 4. 21. 25.

Huxham says, in the preface to his Observations on the Air and Epidemic Diseases, vol. I. p. 1. "The depraved constitutions of the atmosphere, are the causes of almost all epidemic distempers; nay, even the increase and duration of such as are properly styled contagious, greatly depend on those constitutions. For, do we not see, in one year, for instance, in this town, or that city, one or two only, seized with the small-pox or measles, whereas, in another year, from one person at first siezed, the contagion spreads to immense numbers."

This was particularly the case with the small-pox, in the town of Boston, in the year 1721. It was also the case with that disease in New-York, in 1815. In the month of May of this year, a single case of small-pox occurred in or near the lower end of Front Street; from which the disease spread extensively, ravaged the whole city, and most of the adjacent country. The small-pox has not before been epidemic in New-York, since the introduction of vaccination; although, I presume, there has not been a year without cases of that disease occurring in the city.

He, who is not now disposed to admit that there are epidemic periods, must consult the records of the writers on epidemics, from Hippocrates down to the present day; for, it is neither our intention to quote whole volumes in proof of their existence; nor, to attempt to explain their origin; yet, we consider it as a fact well established, although we confess ourselves ignorant of the cause; and, whether they depend on the divine principle in the air, of Hippocrates; the fermentum, of Diemerbroeck;\* the secret constitution of the air, of Sydenham; the cometic influence, of Webster; or, the electricity of the comets thundered on our heads, according to a late writer,† we confess ourselves equally ignorant.

We will close this section by an allusion to some of the laws of epidemic periods.

These periods are extremely uncertain in their dura-

<sup>\*</sup> The assimilating fermentation of Walker and Hosack. See the Transactions of the New-York Literary and Philosophical Society. Art. II. Hosack on the laws of Contagion. p. 232.

<sup>†</sup> Gallup on the Epidemic Diseases of the State of Vermont.

tion, lasting from one or two months, to one, two, four, six, ten, twelve, or more years.

The influenza, which appeared in New-York the first of October, 1815, lasted about two months. The late yellow fever period, in the United States, continued eleven years.

The extent of country in which an epidemic period is present, at the same time, is very uncertain. Sometimes it is confined to a single city; but most commonly, it extends over a whole country; and occasionally, almost the whole of the habitable globe feels its influence.

The influenza, in 1815, was very general in the United States, and in Canada. In 1807, this disease spread extensively throughout both continents.

Each and every epidemic, appears to have its own peculiar periods. The periods of two or more epidemics are not likely to occur at one and the same time; although they often follow each other in close succession.

## II. ON YELLOW FEVER PERIODS.

By a Yellow Fever Period, we understand, that season or succession of seasons, in which the fever prevails epidemically.

Whether we consider yellow fever as an epidemic; or, with my learned friend Doctor Hosack,\* "only epidemic

\* See Doctor Hosack's valuable paper on contagion; in which

in as far as the vitiated state of the air is itself epidemic,"\* we must be forcibly impressed with this fact; that it is epidemic only at certain periods; as is evident from the following considerations.

1st. If a case of yellow fever should be generated in any place, or imported thither, if a yellow fever period prevails there, the disease will become epidemic, or spread to immense numbers; and, 2ndly. If a case should occur at a place where a yellow fever period is not present, it will be a sporadic case only; the disease will not spread.

It is unfortunate that we cannot perceive the operations which are going on to fit and prepare the season for the propagation of disease; and that we have no very positive evidence of the approach of an epidemic period, till the epidemic itself appears.

Epidemic periods are often marked by the death of dogs, cats, flies, worms, &c. or by the superabundance of the two latter; and, by the appearance of sundry other diseases, either epidemics, or bordering on them.

That there have been yellow fever periods in the United States, no one will deny. Perhaps the most important one was from 1793 to 1804. The yellow fever, of

he divides contagious diseases into three classes. 1. Those diseases which are communicated exclusively by contact. 2. Those which are communicated both by contact and by the atmosphere. 3. Those which are only, in general, communicable through the medium of an impure atmosphere.

\* This is only a new arrangement of words to express the old idea; for no man ever considered any disease as invariably epidemic, but only so, during certain constitutions of the atmosphere.

this period, first showed itself in Philadelphia; and afterwards it appeared in most of our seaport towns, as well as in many inland places. But whether the first case, which occurred in Philadelphia, was from domestic or from foreign origin, has not been proved to the satisfaction of every one.

The yellow fever, however, during this period, generally began in the most filthy parts of our seaports, and often immediately after vessels, persons, merchandize, &c. had arrived from infected ports or places;\* yet, it sometimes commenced in the most airy and healthy parts of our towns,† far removed from the wharves, and at a time when no vessel, person, merchandize, &c. had, for months, arrived from an infected port or place, and when

\* This is not a contested point; the contagionists, and non-contagionists; the importers and non-importers, all agree in the following circumstances; 1st, that the yellow fever, in the United States, generally commenced in the most filthy parts of our seaports; and often, immediately after vessels, persons, merchandise, &c. had arrived from infected ports or places; 2dly, that it began in the immediate vicinity of the location of such vessels, persons, merchandize, &c.; and, 3dly, that those people, who had had the most intimate connection with the before named vessels, &c. were most generally first affected with the disease. There are very few, who, at present, deny the possibility of importing the yellow fever; if there should be any such, let them consult the pages of the American Medical and Philosophical Register, where will be found positive proof of its importation in a great number of instances. At this stage of the controversy, we deem it wholly unnecessary to make quotations from that work to prove what is so universally admitted as a fact.

† The yellow fever, in Portsmouth, New Hampshire, in 1798, was remarked for being principally confined to Church Hill, the most elevated, airy, and the least filthy part of the town.

it could be traced to no foreign source; \* moreover, it oc-

\* The first appearance of the disease in Boston, was on the 25th of August, 1796, in a family at the southcasterly part of the town, near a considerable extent of flats, which are daily exposed, for some hours, to the action of the sun."\* No mention is made of importation, either by Dr. Warren, or by Dr. Brown, the latter of whom has given a more particular account of its origin and progress in his Inaugural Dissertation. Public opinion did not even accuse any vessel of having imported it. In a subsequent publication,† Doctor Warren says, "As to importation in the above recited cases, there was not the shadow of a reason to suspect the possibility of it."

"About 140 persons died of yellow fever in Boston in 1798. No persons could produce any evidence of importation of this disease."

Doctor Rush and others, in their report to the Governor of Pennsylvania, of the origin of the yellow fever in Philadelphia in 1798, say, it arose from "putrid exhalations from the gutters, streets, ponds, and marshy grounds in the neighbourhood of the city." Because several cases appeared before the arrival of the suspected vessel. They also cite many other cases of domestic origin.

Med. Repos. Hex. I. vol. I. p. 393.

"It has never been alledged by any one, that the malignant fever of last season [1803] was introduced into Philadelphia from the West Indies."

Caldwell's Account of Yellow Fever, Med. Repos. Hex. II, vol. I. p. 150.

Doctor Rosset, in his account of the yellow fever in Wilmington, N. C. in 1796, says, "I have, however, no doubt in my own mind of its having originated among us—from our not being able to trace it to any other source."

Med. Repos. Hex. I. vol. II. p. 154.

The Rev. Doctor Channing, in his account of the yellow fever in New London, Connecticut, in 1798, says, "as we have not

† Warren on Mercurial Practice. p. 97. ‡ Warren on Mercurial Practice. p. 114, 115.

<sup>\*</sup> Professor Warren's Letter to E. Pearson. Med. Repos. Hex. I. vol I. p. 132.

casionally appeared in inland towns, and in persons who had had no connection with infected persons or places.\*

even a shadow of ground to suppose the disease was not of domestic origin, we are urged critically to investigate the cause within ourselves." The writer traces its origin to large quantities of putrid fish. This city has ever been famed for the purity of its air, and health of its inhabitants.

Med. Repos. Hex. I. vol. I. 401.

\* In 1796, the yellow fever prevailed at Galliopolis, on the Ohio river. "The fever could not have been taken there from the Atlantic States, as my boat was the first that descended the river after the fall of the water in the spring; neither could it have been taken from New Orleans, as there is no communication at that season of the year, up the river."

Ellicot's Voyage, Med. Repos. Hex. 1. vol. IV. p. 74.

In 1797 the yellow fever prevailed at New Design, near the Missisippi. Doctor Watkins says, "no person had arrived at that village from any part of the country where this fever had prevailed, for more than twelve months preceding."

Med. Repos. Hex. I. vol. IV. p. 74.

The yellow fever appeared in the country adjacent to Dartmouth college, in 1798. Doctor Spalding in his account of that fever, says, "To give an impartial history of the origin of the fever that prevailed in Hanover, and all the circumstances which can be admitted as evidence of its having been brought from another place, or generated in this, I must observe, that before the present season, this fever had been wholly confined, in New England, to the seaport towns, never having appeared in the country, nor within an hundred miles of this place; that none of the persons who were first affected had visited infected towns for the last six months preceding their attack, and many of them never had. It could not have been introduced by infected goods, for neither merchant nor his clerk had the disease. It appeared before the spring goods arrived, and as early as in other parts of the United States. It appeared in all those country places about the same This evidence have we to warrant us that we are not indebted to Boston, Philadelphia, or the West Indies, for this fever." Med. Repos. Hex. I. vol. III. p. 12.

In those places where it originated spontaneously, it generally became epidemic and spread extensively.

There was a yellow fever period in the United States, about the year 1762; when the fever prevailed in Philadelphia, New-York, &c.

There was a more considerable yellow fever period, from 1739 to 1748, in which the fever prevailed extensively in South Carolina, Virginia, New-York, Albany, &c.

About the year 1669 there was another yellow fever period, in which this disease prevailed in Philadelphia, South Carolina, &c.

From 1762 to 1793, and from 1804 to 1818, there has been very little of the yellow fever in the United States; and I do not find that it has once raged epidemically, during either of those intervals.

Sometimes a yellow fever period lasts only one season; at other times, it continues for a succession of years. It is occasionally confined to a single city, or a limited district of that city;\* but at other times it extends over a whole country, or many countries.†

\* In Baltimore, during the present season, 1819, the yellow fever is said to be confined to Fell's Point, while the other part of the city is unusually healthy. Something like this may be said of New-York, where the disease appears to be confined to the meighbourhood of the Old Slip.

† The late yellow fever period was predominant in Spain, and all the south of Europe, as well as in the United States and the West Indies.

We think then, that we are entitled to this inference, that there are yellow fever periods; or certain periods of time, during which the yellow fever is more liable to arise and spread, than at other times, under apparently similar circumstances.

# III. ON WHAT GENERATES THE YELLOW FEVER.

The next question to be decided, is, what generates the yellow fever; for if with some, you trace the fever of 1793, from Philadelphia to Granada, from Granada to Bulama, from Bulama to Terra Incognita, nobody will father it; no country will acknowledge that it originated with them. Still, it must have been generated somewhere, something must have produced it. It could not have arisen without a cause. The same evasive story has, for centuries, been told of the plague. Hodges\* says, the great plague of London, in 1664, was "imported to us from Holland, in packs of merchandize; and, if any one pleases to trace it further, he may be satisfied by common fame, it came thither from Turkey." To which Webstert very shrewdly remarks: "why, in the name of common sense, should two or three infected persons in 1664, spread the plague over London, and desolate the city, when twelve, fourteen, twenty, and thirty-six infected persons, who died in preceding years, produced no ill effects? To account for such effects on the principle of infection, is not possible; and men of science ought to be ashamed of such absurdities."

<sup>\*</sup> Historical account of the Plague, p. 30.

<sup>†</sup> History of Epidemics, Vol. I. p. 196.

The plague, which has so frequently ravaged Vienna, is always referred to Constantinople, from Constantinople to Egypt, from Egypt to Turkey, from Turkey to Terra Australis; for the poor Turks have no more idea that their beloved country is the birth place of all those plagues which desolate the East, than we have, that our country is the hot bed of all those yellow fevers which ravage the West. In truth, pestilence is a child of many fathers, but disowned by them all. The plague is palmed upon the ignorant Turks without their consent, and in most instances, without even their knowledge.

If we admit that the fever of 1793 was imported into Philadelphia from Granada, and thither from Bulama, the question only reverts, what produced the yellow fever at Bulama? Bulama is an island on the western coast of Africa, in latitude 11° north, and was not inhabited when the English attempted their settlements, in 1787, and again in 1792. Chisholm, who has given a very circumstantial account of this last attempt at colonization, and of the origin of the fever at that place, says; "Bulama being surrounded by the sea, enjoys all the advantages of the sea breeze; and being dry, and not incommoded by any marshy tracts, it is considered as the healthiest spot on the windward coast.—This part of Africa is allowed, by all who have visited it, to be uncommonly healthy and pleasant." What could have produced the yellow fever at this place? Let us hear what our authort says on its origin, "The Hankey sailed from England in April, 1792; no suspicion whatever can be entertained, of the existence of latent infection among the passengers or

<sup>\*</sup> Chisholm's Essay on the Malignant Pestilential Fever. p. 83.

crew at the time of her arrival at Bulama. The negroes of this part of Africa are ferocious in an extraordinary degree; and are even said to be cannibals. This circumstance prevented the erection of any sort of accommodation on shore, during the nine months the Hankey lay there the settlers were obliged to live on board, and the rainy season coming on almost immediately after their arrival, and the heat being at the same time excessively great, they endeavoured to shelter themselves from both, by raising the sides of the ship several feet, and covering her with a wooden roof.

Among upwards of two hundred people, of whom women and children constituted a part, thus confined in a sultry moist atmosphere, cleanliness could not be well attended to, however well inclined the people themselves might be. These circumstances, joined to the depression of mind consequent upon their disappointment, must certainly be considered as the cause of the malignant fever which broke out among those unfortunate people, some time after their arrival at Bulama."

This is a satisfactory answer to our question; and does any man believe, that under similar circumstances, the like disease could not be produced in another place? Why then constantly allude to Bulama and the West Indies?

Public opinion is in favour of extreme heat continued for a length of time, together with great filthiness, as being the generative cause of yellow fever. And, so far as we know, in most instances where it has appeared spontaneously, not from importation, extreme heat continued for a length of time and great filthiness, have prevailed.

Perhaps other exciting causes concur in its production; if so, they are of so subtle a nature as to have cluded our researches.

We will now examine the circumstances which are deemed necessary for the generation of yellow fever. It will be recollected that we speak of its spontaneous origin in a place, and not of its importation.

#### 1. EXTREME HEAT CONTINUED FOR A LENGTH OF TIME.

It is not necessary to spend much time on this division of our subject, for in every instance where yellow fever has been supposed to arise spontaneously, it has been during the extreme heat of summer; and it has as uniformly subsided on the approach of frosty weather. In fact, the yellow fever is acknowledged by all to be the offspring of hot countries.

"This malignant disease has never been known to prevail, except in tropical climates, or in those seasons of the more temperate climates, in which the atmospheric heat has for some length of time, been equal to the tropical heat, that is, at or about 80° of Fahrenheit's thermometer.\* There is no instance in the United States, or in Europe, of an epidemic yellow fever, except at these degrees of heat, nor of its long continuance after

\* "The yellow fever seems to require a long continuance of heat at eighty degrees to its origin."

Hosack's Register, vol. I. p. 27.

A writer in the VII. volume of the Eclectic Repertory, says, "the yellow fever never prevails in Philadelphia, unless the mean heat at 3 o'clock P. M. in the months of June and July is equal to 79°.

the atmosphere had been reduced to a much lower degree of temperature."

See Miller's Appendix to Thomas's Practice, p. 659.

#### 2. GREAT FILTHINESS.

Doctor Rush traces the yellow fever of 1793 to "a quantity of damaged coffee which had been thrown upon Mr. Ball's wharf, and in the adjoining dock, and which had putrified there to the great annoyance of the whole neighbourhood."

Rush's Inquiries, vol. III. p. 12.

"Many of the most judicious citizens of New-York," says Doctor Miller,\* "were convinced of the origination of the yellow fever from domestic filth in the year 1798, by the following fact. Between twenty and thirty persons, at the commencement of that destructive epidemic, in a circumscribed neighbourhood at the lower end of John-street, were suddenly seized with the disease in one night, in consequence of a current of putrid and most offensive exhalations from the sewer of Burling-Slip. The persons attacked were only such as lived directly to the leeward of this blast from the sewer; while many others close in the vicinity, but not exposed to this current, entirely escaped."

Doctor Miller thinks the yellow fever arises from the filthy exhalations of new made ground.

In 1799, the yellow fever was generated on board the United States' frigate, General Greene, from the putrifac-

<sup>\*</sup> Appendix to Thomas's Practice, p. 664.

tion of fish and other articles of provisions, occasioned by their being wet, from a leakage in the ship.

Medical Repository, Hex. I. vol. 4. p. 2.

Dr. Warren, in his view of Mercurial Practice, page 126, when speaking of yellow fever, says; "epidemic disease must originate somewhere. Extreme heat, confinement of air, impurities, and a variety of other causes may generate yellow fever any where."—Again, "yellow fever, I have no doubt, has originated in this way; [in a foul ship at sea] but in the same way it may, and I believe often does, originate also on shore; whenever certain combined causes, such as heat, an extremely dry air, and many other means, which are perhaps too abstruse and occult for human investigation, are brought into action."

"They have very limited ideas of the history of this fever, who suppose it to be peculiar to the East or West Indies. It was generated in Cadiz after a hot and dry summer in 1764, and in Pensacola in 1765. The same causes (under like circumstances) must always produce the same effects."

Rush's Inquiries, vol. III. p. 128.

#### 3. A CERTAIN CONSTITUTION OF THE AIR.

We have already mentioned our inability to explain the secret constitution of the air; however, there can be no question that the fever will be more readily generated during a yellow fever period, than at any other time. Is it not more than probable then, that the peculiarities of that period have some influence in generating the disease?

We are fully of this opinion; because, we see the yellow fever springing up in a multitude of places during a yellow fever period, where, at other times, when the heat and filth have been as great, or greater, there has been no appearance of this disease.

Doctor Caldwell, an eminent physician of Philadelphia, says, in his Memoirs, page 130, that the following question is frequently asked: "Why does the filth of Philadelphia produce yellow fever now, [1798,] whereas, it did not in former years, when much more abundant than it is at present."

In the 136th page of the same work he answers, "Because we have at present a pestilential constitution of atmosphere, favourable to the production of yellow fever, which did not exist with us in its full force, previous to the year 1793."

Then, if extreme heat continued for a length of time, great filthiness, and a certain constitution of the air, will generate the yellow fever, we do believe that it is not material, whether the place be Bulama, Granada, or Philadelphia, or a ship at sea.

When the yellow fever is once generated, we are perfectly satisfied that it can be experted to another country or place.

1. If it should be imported into a town where a yellow fever period does not prevail, the disease would not be-

come epidemic, and it would require much exposure to produce a single case.\*

- 2. If imported into a place where a yellow fever period does prevail, the disease would become epidemic by common exposure.
- 3. If this disease should be brought to a city, where, together with a yellow fever period, there should have been long continued extreme heat and great filthiness, the least imaginable exposure, a mere spark, would be sufficient to enkindle the already recking materials into a blaze, which would spread destruction far and wide.

On these principles we believe, that every possible variety in the origin, spreading, and progress of the yellow fever, can be explained.



Having concluded our Reflections on Yellow Fever Periods, we beg leave to observe, that, from all we can learn, the yellow fever of this season has shown a little variety in its character, from that of former years. It has borne less resemblance to the bilious remittent fever of our country, than formerly. "In several instances, the fever has consisted of but one paroxysm; it had

\* "The facts which have been ascertained relative to the communication of yellow fever, furnish conclusive evidence that this disease is, or is not generally contagious, depending on the qualities of the air to which it may be communicate."

Transactions of the New-York Lit. and Phil, Soc. art. II.

Hosack on the laws of Contagion. p. 219

neither intermission nor remission; it showed very little variation from beginning to end, except the rapid increase of arterial action to its greatest height, and its regular subsidence into the shades of death."

The origin of most of the cases, if not of all of them, which have occurred in Philadelphia, Baltimore, Boston, and New-York, can, we are informed, be traced to that particular part of each city, where the disease commenced, and, as yet, few, if any persons, have taken the fever from those who have died in other parts of these cities.